

Notice of Allowability

Application No.

10/572,702

Examiner

Tran N. Nguyen

Applicant(s)

FUTAMI, TOSHIHIKO

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☒ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

DETAILED OFFICE ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings were received on 3/17/06. These drawings are approved.

Abstract

The abstract of the disclosure is objected to because the abstract contains two paragraphs. The abstract should contains only one single paragraph as set forth (see MPEP § 608.01(b)).
Correction is required.

Specification

The disclosure is objected to because of the following informalities: the specification, particularly in the SUMMARY OF THE INVENTION section (pages 2-3) referring to claims. e.g., the specification's paragraphs [0010] and [0011] are written:

*[0010] To achieve the above object, the present invention provides a permanent magnet motor set forth in **claims 1 to 5**.*

*[0011] **Claim 1** of the present invention sets forth a permanent magnet motor comprising a rotor equipped with a rotor core which is a generally pillar-shaped stack of steel plates*

The applicant is request to completely review the entire specification content for appropriate corrections requirements, i.e., deleting all the referring to "claim" in the specification.

Allowable Subject Matter

Claims 1-6 are allowed.

Reason for Allowability

The following is an examiner's statement of reasons for allowance: **in combination with other limitations recited in the claims**, the primary reason for the allowance is the including the following inventive features of an embedded permanent magnet rotor, wherein the *rotor core particularly having a plurality of radially elongated slits arranged apart from each other along each of the permanent-magnet-holding slots on an outer core outside the permanent-magnet-holding slots, and wherein the slits are spaced approximately equally at a radially outer end, while at a radially inner end, spacing between the slits is reduced with increasing distance from a center of each permanent magnet, with the spacing at the center being the largest.*

Comparing to the prior-art of the record, the most relevant refs are JP-2005-145148, JP-2001-37127, WO 2004-051824, JP- 08-182267, JP-11-187597, JP-2002-084690, JP-2001-037186. These refs respectively disclose embedded permanent magnet rotors, wherein each of the rotors being configured with elongated slits arranged apart from each other along each of the permanent-magnet-holding slots on an outer core outside the permanent-magnet-holding slots. Among these refs, some refs disclose that the slits are spaced approximately equally while the radial size, i.e., the length, and/or the circumferential size, i.e., the width may be varied. Alternately, other of the refs discloses the spacing intervals between the slits are varied, but the slits are spaced equally at both radial outer end and radial inner end thereof. Thus, none of the prior art references of the record, either stand-alone or in combination, has taught or suggest the above-mentioned features of the *slits are spaced approximately equally at a radially outer end, while at a radially inner end, spacing between the slits is reduced with increasing distance from*

a center of each permanent magnet, with the spacing at the center being the largest, in combination with other limitations recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

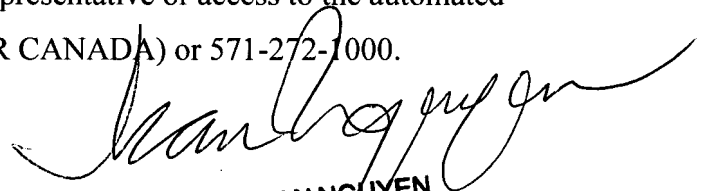
Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is 571-272-2030. The examiner can normally be reached on 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. (**Note: Use this Central Fax number 571-273-8300 for all official response.**)

Do **not** use the Examiner's RightFax number without informing the Examiner first because, according to the USPTO policy, any document being sent via RightFax is treated as unofficial response and will not be officially dated until it is routed to the Central Fax.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


**TRAN NGUYEN
PRIMARY EXAMINER**